

REMARKS

Claims 1-14, 17, 18, 20, 21, and 23-28 are pending.

Claims 15-16, 19, and 22 have been cancelled.

In the Office Action dated August 30, 2010, claims 1-5, 7-10, 11-14, 17-18, 20-21, and 24-28 were rejected under 35 U.S.C. § 103(a) as unpatentable over de Jong (U.S. Patent No. 7,107,534) in view of HD\_Speed (SteelBytes.com) and Riedel, Active Disks-Remote Execution for NASD; claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over de Jong, HD\_Speed, Riedel, and Matsumoto (U.S. Patent Publication No. 2002/0124124); and claim 23 was rejected under 35 U.S.C. § 103(a) as unpatentable over de Jong, HD\_Speed, Riedel, and CD Speed 2000.

It is respectfully submitted that the obviousness rejection of independent claim 1 over de Jong, HD\_Speed, and Riedel is erroneous.

To make a determination under 35 U.S.C. § 103, several basic factual inquiries must be performed, including determining the scope and content of the prior art, and ascertaining the differences between the prior art and the claims at issue. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459 (1965). Moreover, as held by the U.S. Supreme Court, it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine reference teachings in the manner that the claimed invention does. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007).

With respect to the “computer-readable program code” clause of claim 1, the Office Action cited de Jong, 08/30/2010 Office Action at 3. As purportedly disclosing that the computer-readable program code is executable by the drive controller (provided at the data access drive) for generating drive information and the user interface rendering data, the Office Action pointed specifically to column 6, line 60 – column 7, line 23, of de Jong. *Id.*

The cited passage of de Jong refers to “graphical user interface (GUI) functional features of the storage administration system.” De Jong, 6:61-63. This passage refers to Fig. 1C of de Jong, which depicts a Desktop window 150 GUI that a system administrator (user) will see when administering storage enclosures over an enterprise network **from a computer having the client component**. *Id.*, 7:3-7. The cited passage also explains that “when a user, such a system administrator, launches a **client component** of the storage administration system, the first window that opens is the Desktop window 150 of Fig. 1C.” *Id.*, 7:7-10 (emphasis added). As

further explained in de Jong, the administrator “can administer any of the storage enclosures in the enterprise network 102 via any computer having the client component software.” *Id.*, 5:58-60 (emphasis added).

The client component that executes on a computer clearly does not execute on a drive controller at a data access drive. Note that de Jong specifically teaches that an administrator administers storage enclosures over the enterprise network from a computer having the client component. *Id.*, 7:5-7. Thus, it is clear that the client component is executed on a computer that is separate (in fact separated by the enterprise network) from storage enclosures that have controllers and disk drives (as mentioned in column 6, lines 28-45 of de Jong). Since the client component (which generates the Desktop window 150 of Fig. 1C) executes on a computer that is clearly **separate** from the storage enclosures, such client computer would not be executed by the drive controller at the data access drive. Thus, the client component of de Jong that generates the desktop window 150 of de Jong cannot possibly constitute the computer-readable program code executable by the drive controller for generating drive information and user interface rendering data, as claimed.

The Examiner erred in arguing that column 6, lines 4-20, of de Jong “implies that the computer-readable program code is executable by the drive controller.” 08/30/2010 Office Action at 4. The column 6 passage of de Jong explains that a server computer can have a software server component that can intelligently communicate to various storage enclosures. As noted in column 6, lines 28-45, of de Jong, the storage enclosures include controllers and hard disk drives. These controllers and hard disk drives of the storage enclosures are clearly different from the server computers that have the software server components of de Jong. Thus, the server computers cannot be considered the controllers of the storage enclosures that are explicitly indicated as being different from the server computers of de Jong.

Even more **fundamentally**, there is absolutely no hint whatsoever that the client component for generating the desktop window 150 of Fig. 1C of de Jong would execute on the server computer. Thus, even if the server computer were to be considered the “drive controller” of claim 1 (which is erroneous since the server computer is not provided at the data access drive), there is no hint that the client component of de Jong executes on the server computer. De Jong specifically explains that the client component executes on the client computers that are used by the administrators.

Thus, in view of the mis-application of teachings of de Jong to various elements of claim 1, it is clear that the obviousness rejection of claim 1 over de Jong, HD\_Speed, and Riedel is erroneous.

In addition, HD\_Speed, like de Jong, also refers to disk software that is executed by a computer, not by drive controller at a data access drive. As clearly evidenced by HD\_Speed reference, the “disk software” that is the subject of HD\_Speed is for use with one of several WINDOWS® platforms (indicated as 95, 98, Me, NT4, 2000, and XP operating systems in HD\_Speed). The fact that the disk software of HD\_Speed is for use with a WINDOWS® platform establishes that its disk software is loaded and executed on a **host computer** that runs such operating system, and is **not** loaded and executed on a **drive controller at the data access drive** (which the Office Action had equated with a hard or removable drive in Maffezzoni, *see* 03/18/2010 Office Action at 3).

As purportedly disclosing the execution of computer-readable program code by a drive controller at a data access drive, the Office Action cited Riedel. 08/30/2010 Office Action at 4. Riedel discloses active disks with enhanced computational power. Page 11 of Riedel notes that the active disks are able to execute application-level code on drives. However, there is absolutely no hint given anywhere in Riedel that its application-level code that is executable on the drives is for generating drive information and user interface rendering data, where the drive information comprises a status of the data access drive and an operating speed of the data access drive, and where the user interface rendering data produced by the computer-readable program code is used by a user interface module to output drive information via a user interface, as recited in claim 1.

As purported reason to combine the reference teachings, the Office Action cited pages 1-5 of Riedel. *Id.* Page 4 of Riedel refers to disk drives that “know their contents,” disk drives that “know when to back themselves up,” and disk drives that “know there’s a problem before it happens.” However, it is clear that Riedel itself provides no hint whatsoever that its software is executable on a drive controller at a data access drive to generate drive information and **user interface rendering data**, where such user interface rendering data is used by a user interface module to output drive information via a user interface.

The Office Action has cited to no specific hint given in any of the references regarding executing computer-readable program code by a drive controller at a data access drive to

generate user interface rendering data, where a user interface module is to output the drive information via a user interface **in accordance with the user interface rendering data**. The concept of program code executed at a disk drive for generating user interface rendering data clearly does not exist in any of de Jong, HD\_Speed, and Riedel. More specifically, page 4 of Riedel merely indicates that the intelligence that can be provided at a disk drive is used to allow the disk drive to know its contents, to know when to perform backup, and to know if a problem exists. There is no hint whatsoever in Riedel regarding program code in a disk drive being able to generate user interface rendering data as claimed.

Thus, even if de Jong, HD\_Speed, and Riedel could be hypothetically combined, the hypothetical combination of the references would not have led to the claimed subject matter.

Moreover, it is respectfully submitted that a person of ordinary skill in the art would not have been prompted to combine the teachings of de Jong, HD\_Speed, and Riedel, to achieve the claimed subject matter. As discussed above, like HD\_Speed, de Jong specifically describes software (client component) executable on a host computer for generating the Desktop window 150 shown in Fig. 1C. Therefore, it is clear that both de Jong and HD\_Speed would have led a person of ordinary skill in the art **away** from executing computer-readable program code by a drive controller (provided at the data access drive) for generating the drive information and user interface rendering data of claim 1.

As explained in the Background section of the present application:

Although software may be provided (e.g., on a network computer) that allows the user to view and configure the drives, the user has to install the software before it can be used. In addition, the software may not be compatible with the user's operating system.

Specification, ¶ [0004]. The teachings of de Jong and HD\_Speed are similar to what is described in the Background section of the present application—namely, that software related to a drive is executed on a host computer instead of a data access drive.

The third reference, Riedel, cited by the Office Action refers to active disks, but provides absolutely no hint whatsoever of addressing the issue raised in the Background section of the present application. Stated differently, a person of ordinary skill in the art would not have been led by Riedel to modify the teachings of de Jong and HD\_Speed to incorporate the software described in de Jong and HD\_Speed in a data access drive for execution on a drive controller of the data access drive for generating drive information **and** user interface rendering data.

Since a person of ordinary skill in the art would not have been prompted to combine the teachings of de Jong, HD\_Speed, and Riedel, the obviousness rejection of claim 1 is further defective for the foregoing reason.

The obviousness rejection of independent claims 11 and 18 over de Jong, HD\_Speed, and Riedel is similarly erroneous.

Dependent claims are allowable for at least the same reasons as corresponding independent claims.

In view of the allowability of base claims, the obviousness rejections of dependent claims have been overcome.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 08-2025 (200312050-1).

Respectfully submitted,

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